CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

An ISO 9001:2008 Certified Company

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

JAS-ANZ BSCIC ISO 9001 REGISTERED

Job No.: CTCE/BBMP/WNo.17/MK/WMM/Gradation/2014-15

17.04.2014

GRADATION FOR WMM
MORTH TABLE-400-11

Client : **Asst. Executive Engineer,** Yeshwanthapura Sub Division, BBMP, Bangalore.

Agency : **Mr. M. Krishnamurthy,** Contractor, Bangalore.

Name of Work : Providing and laying HDPE Water line in Ganesha Temple Block - IV in JP Park, Ward No. 17, BBMP, Bangalore.

Reference : EE/RRND/Wo. No./221/2013-14 Dated: 05.02.2014

Date of Testing : 17.04.2014

Material : WMM

Sample ID : WMM Layer

Oven Dry Wt (gm): **7860**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	195	195	2.5	97.5	95-100
22.4	2655	2850	36.3	63.7	60-80
11.2	1350	4200	53.4	46.6	40-60
4.75	1025	5225	66.5	33.5	25-40
2.36	900	6125	77.9	22.1	15-30
0.600	745	6870	87.4	12.6	8-22
0.075	615	7485	95.2	4.8	0-8

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples received in the laboratory.
3. Any Query regarding the report must be reported within 30 days from the date of testing.

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M/s. Civil-Tech Consultants & Engineers
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GRADATION FOR WMM
MORTH TABLE-400-11

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Agency : **Mr. M. Krishnamurthy,** Contractor, Bangalore.

Name of Work : Providing and laying HDPE Water line in Ganesha Temple Block - IV in JP Park, Ward No. 17, BBMP, Bangalore.

Reference : EE/RRND/Wo. No./221/2013-14 Dated: 05.02.2014

Date of Testing : 17.04.2014

Material : WMM

Sample ID : WMM Layer

Oven Dry Wt (gm): 7775

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	305	305	3.9	96.1	95-100
22.4	2415	2720	35.0	65.0	60-80
11.2	1350	4070	52.3	47.7	40-60
4.75	1055	5125	65.9	34.1	25-40
2.36	925	6050	77.8	22.2	15-30
0.600	825	6875	88.4	11.6	8-22
0.075	630	7505	96.5	3.5	0-8

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Job No.: CTCE/BBMP/WNo.17/MK/WMM/AIV/2014-15 17.04.2014

Aggregate Impact Value

IS: 2386 Part IV

Client	**Asst. Executive Engineer,** Yeshwanthapura Sub Division, BBMP, Bangalore.
Agency	**Mr. M. Krishnamurthy,** Contractor, Bangalore.
Name of the Work	Providing and laying HDPE Water line in Ganesha Temple Block - IV in JP Park, Ward No. 17, BBMP, Bangalore.
Reference	EE/RRND/Wo. No./221/2013-14 Dated: 05.02.2014
Sample ID	WMM Layer
Type of Mix	Wet Mix macadam
Date of Testing	17.04.2014

Sl No.	Details	Trial No. 1	Trial No. 2	Average
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	380	384	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	81	85	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	299	299	
4	Aggregate Impact value = percent fines	21.32	22.14	
	100* (W_2/W_1)%			21.73

Comments:

→ Maximum allowable Aggregate Impact value for Wet mix Macadam is 30%

Note:

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Job No.: CTCE/BBMP/WNo.17/MK/WMM/AIV/2014-15 17.04.2014

Aggregate Impact Value

IS: 2386 Part IV

Client	**Asst. Executive Engineer,** Yeshwanthapura Sub Division, BBMP, Bangalore.
Agency	**Mr. M. Krishnamurthy,** Contractor, Bangalore.
Name of the Work	Providing and laying HDPE Water line in Ganesha Temple Block - IV in JP Park, Ward No. 17, BBMP, Bangalore.
Reference	EE/RRND/Wo. No./221/2013-14 Dated: 05.02.2014
Sample ID	WMM Layer
Type of Mix	Wet Mix macadam
Date of Testing	17.04.2014

Sl No.	Details	Trial No. 1	Trial No. 2	Average
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	382	386	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	81	85	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	301	301	
4	Aggregate Impact value = percent fines	21.20	22.02	
	100* (W_2/W_1)%			21.61

Comments:

→ Maximum allowable Aggregate Impact value for Wet mix Macadam is 30%

Note:

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